

AMENDMENT TO CLAIMS

This listing of claims replaces all prior listings, and versions, of claims in the application.

1. (Currently Amended) A method for promoting structural tissue regeneration, the method comprising contacting the tissue with Use of haematopoietic growth factors, in particular erythropoietin (EPO) or thrombopoietin (TPO), or derivatives, analogues or parts thereof for the preparation of a medicament for promoting structural tissue regeneration.
2. (Currently Amended) The method Use according to Claim 2 1, characterized in that the tissue has previously been traumatized.
3. (Currently Amended) The method Use according to Claim 1 or 2, characterized by the use of the receptor-binding domain of the growth factors or derivatives or analogues thereof.
4. (Currently Amended) The method Use according to Claim 1 or 2, characterized in that a mimetic peptide of one of the growth factors, in particular EMP or DMP, is used.
5. (Currently Amended) The method Use according to one of Claims Claim 1 to 4, characterized in that the growth factors or derivatives, analogues or parts thereof have additional glycosylation sites compared with the native growth factor.
6. (Currently Amended) The method Use according to one of Claims Claim 1 to 5, characterized in that the growth factors or derivatives, analogues or parts thereof are conjugated with PEG.
7. (Currently Amended) The method Use according to Claim 1 or 2, characterized by the use of *novel erythropoiesis stimulating protein* (NESP).
8. (Currently Amended) A method for promoting structural tissue regeneration in a patient, the method comprising administering to the patient Use of an EPO-inducing factor for the preparation of a medicament for promoting structural tissue regeneration.

9. (Currently Amended) The method Use according to one of Claims Claim 1 or 8 to 8, characterized in that one of the following factors is additionally employed: somatostatin, leukemia inhibitory factor (LIF), "ciliary neurotropic factor" (CNTF), "transforming growth factor beta" (TGF beta), prostaglandins, granulocyte-macrophage-stimulating factor (GM-CSF), granulocyte-stimulating factor (G-CSF), growth hormone releasing hormone (GHRH), thyrotropin-releasing hormone (TRH), gonadotropin-releasing hormone (GnRH), corticotropin-releasing hormone (CRH), dopamine, antidiuretic hormone (ADH), oxytocin, prolactin, adrenocorticotropin, beta-celltropin, lutotropin, vasopressin, nerve regeneration factors, preferably nerve growth factor (NGF), vascular regeneration factors, preferably vascular endothelial growth factor (VEGF) or plateled derived growth factor (PDGF).
10. (Currently Amended) The method Use according to one of Claims Claim 1 or 8 to 9, characterized in that endothelial cells are present.
11. (Currently Amended) The method Use according to one of Claims Claim 1 or 8 to 10, characterized in that the regeneration of the tissue is controlled locally.
12. (Currently Amended) The method Use according to one of Claims Claim 1 or 8 to 10, characterized in that at least one of the medicament comprising one or more of the factors according to one of Claims 1 to 9 is are administered topically.
13. (Currently Amended) The method Use according to one of Claims Claim 1 or 8 to 10, characterized in that at least one of the medicament comprising one or more of the factors according to one of Claims 1 to 9 is are administered systemically.
14. (Currently Amended) The method Use according to one of Claims Claim 1 or 8 to 13, characterized in that the growth process is supported by a support structure.
15. (Currently Amended) The method Use according to Claim 13 14, characterized in that the support structure is treated with one of the factors according to one of Claims 1 to 9.

16. (Currently Amended) The method Use according to Claim 14 ~~or 15~~, characterized in that the support structure used is an implant, a transplant or a support material for the growth of cells.
17. (Currently Amended) The method Use according to ~~one of Claims~~ Claim 14 ~~to 16~~, characterized in that the support structure has been pre-colonized with cells, preferably tissue-specific cells, precursor cells, bone marrow cells, peripheral blood, fatty tissue or fibrous tissue, or prepared for *in vivo* colonization or *in vitro* inductive remodelling.
18. (Currently Amended) The method Use according to Claim 17, characterized in that the cells employed are adult progenitor cells, tissue-specific cells, preferably osteoblasts, fibroblasts, hepatocytes or smooth muscle cells.
19. (Currently Amended) The method Use according to ~~one of Claims~~ Claim 1 ~~or 8 to 18~~, characterized in that the cell aggregates forming during the regeneration process are encapsulated and optionally frozen.
20. (Currently Amended) The method Use according to ~~one of Claims~~ Claim 1 ~~or 8 to 19~~, characterized by the regeneration of nerve, muscle, epithelial or connective tissue and organs and structures derived therefrom.
21. (Currently Amended) The method Use according to ~~one of Claims~~ Claim 1 ~~or 8 to 20~~ for the regeneration of the liver, in particular in liver cirrhosis, hepatitis, acute or chronic liver failure.
22. (Currently Amended) The method Use according to ~~one of Claims~~ Claim 1 ~~or 8 to 20~~, characterized by the treatment for the regeneration of bone, cartilage, and tissue of endocrine organs, the cardiac muscle, of heart valves, venous valves, arterial valves, skin, vessels, aortas, tendons, cornea, trachea, nerves, meniscus, discus intervertebralis, intestinal epithelium, ureters, urethra or the bladder, and for the treatment of degenerative diseases or for supporting tissue regeneration in chronic inflammation, such as, for example, in Crohn's disease, colitis ulcerosa or diabetic ulcers, gingiva or for the stimulation of neovascularization after a tissue injury.
23. (Currently Amended) Support structure comprising at least one haematopoietic growth factor or derivatives, analogues or parts thereof

according to ~~one of Claims~~ Claim 1 to 7 or an EPO-inducing factor according to Claim 8.

24. (Original) Support structure according to Claim 23 additionally comprising at least one of the following growth factors: somatostatin, leukemia inhibitory factor (LIF), "ciliary neurotropic factor" (CNTF), "transforming growth factor beta" (TGF beta), prostaglandins, granulocyte-macrophage-stimulating factor (GM-CSF), granulocyte-stimulating factor (G-CSF), growth hormone releasing hormone (GHRH), thyrotropin-releasing hormone (TRH), gonadotropin-releasing hormone (GnRH), corticotropin-releasing hormone (CRH), dopamine, antidiuretic hormone (ADH), oxytocin, prolactin, adrenocorticotropin, beta-celltropin, lutotropin, vasopressin, nerve regeneration factors, preferably nerve growth factor (NGF), vascular regeneration factors, preferably vascular endothelial growth factor (VEGF) or plateled derived growth factor (PDGF).
25. (Currently Amended) Support structure according to Claim 23 ~~or~~ 24, characterized in that the support structure is an implant, a transplant or graft, a support material for the growth of cells, a stent, a patch, a catheter, skin, a hydrogel, a bone replacement material, an allogeneic, autologous or xenogenous, acellularized or non-acellularized tissue, a synthetic tissue, a feeder layer or a fleece.
26. (Currently Amended) Support structure according to ~~one of Claims~~ Claim 23 to 25, characterized in that the support structure is pre-colonized with cells, preferably tissue-specific cells, precursor cells, bone marrow cells, peripheral blood, fatty tissue or fibrous tissue.
27. (Currently Amended) Support structure according to ~~one of Claims~~ Claim 23 to 25, characterized in that the growth factors or derivatives, analogues or parts thereof according to ~~one of Claims~~ Claim 1 to 9 or 8 are embedded in a biodegradable polymer layer.
28. (Currently Amended) Process for the preparation of a support structure for cell regeneration, ~~characterized in that~~ the process comprising coating the support structure ~~is coated~~ with at least one of the growth factors, derivatives, analogues or parts thereof according to ~~one of Claims~~ Claim 1 to 9 or 8.

29. (Original) Process according to Claim 28, characterized by activation of the support structure, preferably by plasma ionization or laser irradiation.
30. (Currently Amended) Process according to ~~at least one of Claims~~ Claim 28 and 29, characterized in that the support structure is pre-colonized *in vitro* with cells, preferably tissue-specific cells, precursor cells, bone marrow cells, peripheral blood, fatty tissue or fibrous tissue.
31. (Currently Amended) The method Use according to ~~one of Claims 1 to 22~~ Claim 1 or 8, characterized in that at least some of the process steps for promoting tissue regeneration are carried out entirely or partly *in vitro*.
32. (Currently Amended) The method Use according to Claim 31, characterized in that the growth process is supported by the administration of stem cells from the bone marrow, blood, tissue, fatty tissue, umbilical cord tissue or blood.
33. (Currently Amended) The method Use according to Claim 32, characterized in that the stem cells are pre-treated *in vitro* with a haematopoietic growth factor, in particular erythropoietin (EPO) or thrombopoietin (TPO), or derivatives, analogues or parts thereof.
34. (Original) Pharmaceutical composition comprising cells which have previously been pre-treated *in vitro* with a haematopoietic growth factor, in particular erythropoietin (EPO) or thrombopoietin (TPO), or derivatives, analogues or parts thereof.
35. (Original) Pharmaceutical composition according to Claim 34, characterized by stem cells pre-treated *in vitro*.
36. (Currently Amended) A method for wound healing or liver regeneration, the method comprising administering to a patient Use of a pharmaceutical composition according to Claim 34 or 35 for wound healing and liver regeneration.